

# BOAT FEE REVENUES & EXPENDITURES

## Fiscal Year 2016 Report

**.08**

**DON'T  
GO OVERBOARD**

Know your alcohol limit when boating.



**STOP AQUATIC  
HITCHHIKERS!**

Prevent the transport of nuisance species.  
Clean all recreational equipment.  
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Department of Natural Resources  
Conservation and Recreation Division  
December 31, 2016  
Chuck Gipp, Director



## EXECUTIVE SUMMARY

In 2005, the Iowa General Assembly amended Iowa Code Chapter 462A.52 to increase boat registration fees for all types of watercraft, to change the registration cycle, and to require the Iowa Department of Natural Resources (DNR) to report on the increased revenues due to the fee increase and how they are expended. This is the tenth such annual report and includes data for FY16 compared to the base year in 2006.

The increased fees are required to be used to control the spread of aquatic invasive species, the administration and enforcement of navigation laws, and water safety education. The mandate required the Department to submit a report to the General Assembly by each year beginning in 2007. It was directed that the report contain summaries of the activities of the Department for the following:

1. Administering and enforcing programs to control aquatic invasive species
2. Administering and enforcing navigation laws and water safety
3. Amount of revenues collected as a result of fee increases
4. Detail of how the boat fee revenues were expended
5. Amount and source of all other boating related funds expended

### **Revenues: Comparisons and projections**

When boat fees were increased in the 2005 legislative session, the registration period also was changed from two years to three years. For planning purposes, the Iowa Department of Natural Resources now plans revenues over three years.

**Table 1**

Previous Revenues Under Two-year Registration Periods				
	FY03	FY04	FY05	FY06
Boat fees	\$2,563,493	\$372,481	\$2,611,295	\$387,908
Federal match	\$1,298,443	\$1,296,070	\$1,411,585	\$1,533,266
<b>Total Revenues</b>	<b>\$3,861,936</b>	<b>\$1,668,551</b>	<b>\$4,022,880</b>	<b>\$1,921,174</b>

Boat fees generated an average of \$1,483,794 per year (calculated from Table 1 above) during the last four years of the two-year registration cycle.

**Table 2**

Collected Revenues Under Three-year Registration Period				
	<b>FY 14</b>	<b>FY 15</b>	<b>FY 16</b>	<b>3-Years of Revenue</b>
Boat fees	\$1,341,359	\$544,541	\$6,849,215	\$8,735,115
Federal match	\$950,466	\$1,370,161	\$1,311,291	\$3,631,918
<b>Total Revenues</b>	<b>\$2,291,825</b>	<b>\$2,711,520</b>	<b>\$8,160,506</b>	<b>\$13,163,851</b>

Looking at the past three years of collected annual revenue (FY14-FY16) the average increase of boat fees is \$1,693,517 in additional state revenue per year over the base year. Federal funds include the safety and education portion and motorboat access portion from the Federal Aid in Sport Fish Restoration program and Aquatic Invasive Species matching funds.

### **Expenditures: Comparisons and Projections**

The final year under the previous fee structure, FY 2006, is the baseline year to measure future years' expenditures. Note that part of the seasonal Water Patrol Officer costs came from the Marine Fuel Tax fund in FY16 at a cost of \$177,351, and \$154,741 was expended from the same fund for navigational safety patrol boats/radios, for an additional \$160,980 for navigation enforcement and boating safety this year.

**Table 3**

General Expenditure Categories		
	<b>Base FY 06</b>	<b>FY 16</b>
Navigation Enforcement and Boating Safety	\$1,995,996	\$ 3,350,976
Boat infrastructure maintenance/mgt	\$749,406	\$ 561,324
Aquatic Invasive Species	\$164,556	\$ 41,092
Water Trails and Dam Safety	\$10,410	\$ 158,943
<b>Total Expenditures</b>	<b>\$2,920,368</b>	<b>\$ 4,112,335</b>

More detailed reporting of program-level expenses follow in this report.

## AQUATIC INVASIVE SPECIES EXPENDITURES

The Iowa Department of Natural Resources Aquatic Invasive Species Program (DNR-AIS) is responsible for monitoring and managing aquatic invasive species (AIS) in Iowa. Goals of the DNR-AIS as stated in the “Plan for the Management of Aquatic Nuisance Species in Iowa” are:

- I. Minimize the risk of further introductions of AIS into the state of Iowa.
- II. Limit the spread of established populations of AIS into uninfested waters in Iowa.
- III. Eradicate or control to a minimum level of impact the harmful ecological, economic, social, and public health impacts resulting from infestations of AIS in Iowa.

Priority AIS in Iowa include zebra mussels (*Dreissena polymorpha*), Bighead Carp (*Hypophthalmichthys nobilis*), Silver Carp (*Hypophthalmichthys molitrix*), Eurasian watermilfoil (*Myriophyllum spicatum*), and brittle naiad (*Najas minor*).

This report reflects expenditures for FY16; however, seasonal staff and survey information is from the summer of 2016 (i.e., May through September). Actions utilized to detect, manage, and prevent the introduction and spread of AIS in Iowa in FY16 included employing seasonal staff, developing partnerships to coordinate AIS activities, increasing public awareness of AIS, managing AIS infestations, and monitoring AIS populations. Major accomplishments included the following.

- Employed 19 Seasonal Natural Resources Aides
- Conducted 8,209 watercraft inspections reaching over 22,700 people
- Conducted 219 angler interviews on 17 trout streams
- Supported 20 partnerships and cooperative projects
- Distributed signs, brochures, identifications cards, banners, posters, tattoos, maps, and regulations booklets
- Leased 6 billboards with AIS prevention messages on interstate and state highways
- Ran internet display ads and video ads targeting specific user groups for two months.
- Used geo-fencing to target ads to users of specific boat ramps for two months
- Targeted water recreationists with AIS prevention messages using magazine advertising, boat ramp signs, print media, news releases, radio and television interviews, displays, and presentations
- Chemically treated 22 waterbodies with brittle naiad or Eurasian watermilfoil
- Surveyed vegetation in 74 waterbodies
- Posted signs at accesses of waterbodies infested with AIS
- Surveyed adult zebra mussels in Clear Lake, Bluebill Lake, Blue Bit, Brushy Creek Lake, Lake Cornelia, and the Spirit/Okoboji chain of lakes
- Placed zebra mussel veliger settlement samplers in lakes and reservoirs across the state
- Collected 64 water samples from 28 lakes and analyzed them for zebra mussel veligers
- Monitored Asian carp in interior and border rivers

- Purchased supplies for DNR Fisheries management stations and hatcheries to prevent the spread of AIS during operations

## Aquatic Invasive Species Program Personnel and Activities

A Natural Resources Biologist has coordinated the DNR-AIS since 2000, and a permanent, full-time Natural Resources Technician was added in October 2006. During the summer of 2016, up to 16 Seasonal Aides conducted watercraft inspections, 2 Seasonal Aides surveyed waterbodies for AIS across the state, and 1 Seasonal Aide provided field sampling assistance to the DNR-AIS. Four Lakeside Laboratory interns supported by a Dickinson Clean Water Alliance Grant and the Okoboji Protective Association assisted with watercraft inspections in Dickinson County in 2016. Watercraft inspectors discussed inspecting watercraft for AIS with operators from May through September 2016. They collected information on AIS presence and location, watercraft type and state of registration, number of people, last and next waterbody visited, and operator familiarity with Eurasian watermilfoil, brittle naiad, zebra mussels, Asian carp, and Iowa's AIS Law. Trailer stickers reminding boaters to prevent the spread of AIS were given to each operator after inspection. The table below summarizes the watercraft inspection effort of the DNR-AIS in 2016 and prior to receiving boat registration funds in 2006 when 2-3 seasonal employees split their time between watercraft inspections and AIS surveys.

Watercraft Inspection Summary		
	2006	2016
Seasonal Employees	3 PT	16 FT
Watercraft Inspected	791	8,209
Personal Contacts	2,350	22,722
Waterbodies	16	54



Due to the identification of New Zealand mudsnails (*Potamopyrgus antipodarum*) in Black Earth Creek in Wisconsin in 2013, an interview survey was developed for Iowa

trout stream anglers in 2014. The Seasonal Aides for the Decorah and Manchester areas conducted 214 interviews on 17 trout streams in 2016. Although 62% of those anglers knew about the AIS Law, only 20% were familiar with New Zealand mudsnails, which are a prohibited AIS in Iowa.

DNR-AIS staff supported several partnerships and working groups in FY16:

- Aquatic Nuisance Species (ANS) Task Force
- US Fish and Wildlife Service Injurious Species Rule Peer Reviewer
- ANS Task Force Communication, Education, and Outreach Committee
- Water Resources Reform and Development Act Asian Carp Report Committee
- Mississippi River Basin Panel on ANS (Interim Chair of Prevention and Control Committee)
- Missouri River ANS Work Group
- Missouri River Basin Asian Carp Control Strategy Framework Coordination Committee
- Association of Fish and Wildlife Agencies (AFWA) Invasive Species Committee (Vice Chair)
- AFWA Aquatic Invasive Species Risk Screening Work Group
- Midwest Invasive Plant Network (Executive Board Member)
- Midwest Aquatic Plant Management Society
- Upper Mississippi River Asian Carp Coordination Committee
- Upper Mississippi River Asian Carp Deterrent Strategy Team Member
- Upper Midwest Invasive Species Conference (Planning Committee Member)
- Mississippi Interstate Cooperative Resource Association
- Iowa Chapter of the American Fisheries Society (Past-President)
- Iowa Weed Commissioners Association
- Iowa State University Natural Resources Ecology and Management Outdoor Skills Committee
- Conservation Leaders for Tomorrow
- REAP City Scoring Committee



## Aquatic Invasive Species Outreach Materials



The DNR-AIS has different types of outreach materials targeting water recreationists in Iowa. Targeted internet videos (180,000), website banner advertising (20,000/month), and geofencing advertisements (40,000) were used from the July 4<sup>th</sup> weekend through Labor Day in 2016 to provide messages alerting boaters about the AIS Law and how to “Clean, Drain, Dry” boats and equipment when leaving a water access. Magazine advertisements were also used in targeted areas to promote the “Clean, Drain, Dry” message.

The DNR-AIS also provided information through 6 billboards posted along interstate and state highways near high-use and infested waterbodies in Iowa. Banners with billboard images were also made available to be displayed near boat ramps in areas of the state without billboards and at outdoor events.

Exhibits at the 2016 Iowa State Fair included a “Stop Aquatic Hitchhikers!” poster, a “Clean, Drain, Dry” banner, and live Asian carp.

Signs emphasizing the AIS Law continued to be posted at all boat access sites in 2016. In addition to information available on the Iowa DNR website, the following informational materials were available during watercraft inspections, at all Iowa DNR Fisheries regional and field offices, during the Iowa State Fair, at state and county parks and nature centers, and at presentations and field days.

- Protect Our Waters brochure
- Protect Our Waterfowl Habitat brochure
- AIS identification cards
- Keep a Lookout for New Invasive Aquatic Plants in the Midwest flyer
- 2016 Iowa Fishing Regulations booklet
- Handbook of Iowa Boating Laws and Responsibilities
- Stop Aquatic Hitchhikers tattoos, koozies, sun kits
- Spirit Lake, East Okoboji Lake, West Okoboji Lake boaters’ maps with car wash locations

News releases targeted statewide audiences regarding AIS updates in Iowa, June as Invasive Species Awareness Month, and before high-use boating events such as Memorial Day and July 4<sup>th</sup> weekends. DNR-AIS and Fisheries staff were also interviewed for radio programs, television stories, and newspaper articles regarding AIS distribution, identification, management, and prevention. Facebook postings also included AIS information in FY16.

DNR-AIS staff participated in fishing and outdoor events in FY16 to spread the AIS message and also gave presentations about AIS in a variety of settings.

- Iowa DNR Fisheries Seasonal Aides, Iowa DNR Water Patrol Officers, and Student Conservation Association Intern Training
- Taking the Road Less Traveled: Career Conferences for Girls
- Outdoor Journey for Girls Workshops
- Becoming an Outdoors Woman Workshop
- ISU Natural Resources Ecology and Management Outdoor Skills Weekend
- Story County Wild Women of the Woods Weekend
- ISU Student Chapter of the American fisheries Society Skills Event
- Iowa Children's Water Festival
- Ding Darling Day at the National Mississippi River Museum and Aquarium
- Des Moines Boat Show
- Central Iowa Anglers Meeting

Data collected during watercraft inspections indicates that public awareness of AIS in Iowa has increased as a result of DNR-AIS outreach activities. Fifty-one percent of boaters interviewed in 2001 said that they were familiar with invasive species. That number increased over the years and rose to over 94% in 2015. In 2016, 92% of boaters said they had heard about invasive species. Knowledge of the AIS Law has also increased from a low of 22% in 2004 to 90% in 2016. In addition to being aware of the AIS Law in general, 85% of the boaters in 2016 knew of the recent change prohibiting the transport of all aquatic vegetation and 92% knew about the draining requirements.

## **Aquatic Invasive Species Management and Monitoring**

DNR Fisheries staff cooperated with DNR-AIS staff to chemically treat brittle naiad (BN) and Eurasian watermilfoil (EWM) infestations in 2016.



- Casey Lake (Tama County), BN
- Carter Lake (Pottawattamie County), EWM
- Great Western Pond (Carroll County), BN
- Grundy County Lake (Grundy County), BN
- Lake Iowa (Iowa County), BN
- Lake Hendricks (Howard County), BN
- Lake MacBride (Johnson County), BN
- Nelson Park Lake (Crawford County), BN
- Rodgers Lake (Benton County), BN
- Yellow Smoke Lake (Crawford County), BN
- Martens Lake (Bremer County), BN, EWM
- Lower Pine Lake (Hardin County), BN
- Pleasant Creek (Linn County), BN
- Plainfield (Bremer County), BN
- Koutny Pond (Buchanan County), BN
- Slip Bluff (Decatur County), BN
- Nine Eagles (Decatur County), BN
- Dog Creek (O' Brien County), BN



Natural Resource Aides surveyed aquatic vegetation in 74 Iowa waterbodies in June, July, and August 2016 to detect new AIS infestations and monitor managed AIS infestations. Natural Resources Aides also conducted 231 access point surveys at lakes around the state during the summer of 2016. Fisheries and wildlife biologists and county conservation board staff also monitored aquatic vegetation in their areas during management activities. Three new infestations of Eurasian watermilfoil (EWM) and three new infestations of brittle naiad (BN) were discovered in Iowa in 2016.

- Blue Pit (Cerro Gordo County), EWM
- Brushy Creek Lake (Webster City), EWM
- Upper Pine Lake (Hardin County), EWM
- Gateway Park South Lake (Iowa County), BN
- Lower Pine Lake (Hardin County), BN
- Meyer Lake (Winneshiek County), BN

Signs are posted at all AIS-infested waterbodies alerting the public about the species present and how to prevent their spread. Eurasian watermilfoil has been identified in 50 waterbodies, including private ponds, in Iowa since 1993, and brittle naiad has been identified in 58 waterbodies since 2003.

The following interior lakes in Iowa have known infestations of zebra mussels.

- Bluebill Lake (Cerro Gordo County)
- Blue Pit (Cerro Gordo County)
- Clear Lake (Cerro Gordo County)
- East Okoboji Lake (Dickinson County)
- Lake Cornelia (Wright County)
- Lower Gar Lake (Dickinson County)
- Minnewashta Lake (Dickinson County)
- Upper Gar Lake (Dickinson County)
- West Okoboji Lake (Dickinson County)

A new zebra mussel infestation was indicated by a settlement sampler in Bluebill Lake in July 2012 and confirmed with additional sampling that year. By 2014, adult zebra mussels covered rocks around the fishing jetty about 5 feet below the water surface.



A reproducing population of zebra mussels was confirmed in Blue Pit Lake in March 2016. Subsequent sampling of adults and veligers indicated a recently established population throughout the lake.

Zebra mussels were first discovered in Clear Lake in 2005. DNR-AIS and DNR Fisheries staff have surveyed zebra mussel densities in Clear Lake each summer since 2006 by counting individuals attached to hard substrate. Zebra mussel densities tend to fluctuate annually in Clear Lake.

A single zebra mussel was found on a settlement sampler in September 2012 in Upper Gar Lake. No other adults or veligers were found at that time within the entire Spirit Lake/Okoboji chain of lakes. In the fall of 2013, DNR Fisheries staff documented low numbers of adult and juvenile zebra mussels in East Okoboji, Minnewashta, West Okoboji, and Lower Gar Lakes. Subsequent monitoring has included veliger sampling, settlement samplers, and dock/hoist inspections in the entire chain of lakes and nearby lakes

used by the DNR Spirit Lake Hatchery for rearing walleyes (i.e., Welch Lake, Sunken Lake). Veligers have been found in water samples from all lakes except Spirit, Welch, and Sunken Lakes. Hard substrate sampling and dock/hoist inspections in 2016 confirmed that zebra mussel distribution and densities are expanding within the Spirit Lake/Okoboji chain of lakes except for Spirit Lake.

An adult zebra mussel was found on a personal watercraft lift by a resident on Lake Cornelia in June 2014. DNR-AIS staff found veligers in water samples at that time and individual adult zebra mussels in two locations around the lake later that summer. Sampling in 2015 and 2016 found very low numbers of veligers and no adults.

Lake Delhi (Delaware County) was infested with zebra mussels before the dam failed in 2010 and eliminated the former lake on the Maquoketa River. No zebra mussel adults or veligers have been found in the Maquoketa River since the Lake Delhi dam broke.

In October 2007, zebra mussels were discovered on a boat that had been transported from the Mississippi River and moored at a marina on Rathbun Lake (Appanoose County). DNR-AIS and DNR Fisheries staff found no zebra mussels in the lake at that time. Staff conducted dive surveys annually from 2008 until 2011 and found no adult zebra mussels in the marina or surrounding areas. Additionally, no zebra mussels have been observed on settlement samplers placed in Rathbun Lake each summer since 2008. Very low numbers of veligers were detected in water samples collected from 2008 through 2011; however, no veligers were collected in 2012 through 2014. Very low numbers of veligers were again found in water samples in 2015 and 2016.

DNR-AIS and DNR Fisheries staff placed zebra mussel settlement samplers in additional lakes and reservoirs throughout Iowa in 2016 to monitor for early detection of zebra mussels. No new zebra mussel infestations were discovered from settlement sampler monitoring in 2016.

The Cedar and Iowa Rivers are influenced by the zebra mussel population in Clear Lake because the outlet of Clear Lake flows into Willow Creek and then to the Winnebago, Shell Rock, Cedar, and Iowa Rivers. Low densities of veligers and individual adults have been collected from each of those rivers during sampling.

DNR-AIS staff collected water samples for zebra mussel veliger analysis from the following additional lakes in 2016.

- Airport Lake (Chickasaw County)
- Big Creek Lake (Polk County)
- Blue Pit (Cerro Gordo County)
- Bluebill Lake (Cerro Gordo County)
- Brushy Creek Lake (Webster County)
- Dickcissel Pond (Boone County)
- Don Williams Lake (Boone County)
- Lake Ahquabi (Warren County)
- Lake Cornelia (Wright County)
- Lake Hendricks (Howard County)
- Lake Iowa (Iowa County)
- Lake MacBride (Johnson County)
- Little Wall Lake (Hamilton County)
- Meyer Lake (Winneshiek County)

- Rock Creek Lake (Jasper County)
- Rudd Lake (Floyd County)
- South Prairie Lake (Black Hawk County)
- Volga Lake (Fayette County)

Zebra mussel veligers were found in Brushy Creek Lake in 2015 and 2016; however, no adults have been found in the lake during hard substrate sampling.

Bighead Carp and Silver Carp have been reported in increasing numbers throughout the Mississippi and Missouri Rivers and tributaries in Iowa for over 10 years. DNR-AIS staff assisted with Asian carp collection for an Iowa State University (ISU) research project funded by DNR-AIS that began in 2013 and will continue through 2017. The project is evaluating Asian carp population characteristics, dynamics, and reproduction in the Mississippi, Des Moines, Skunk, Iowa, Cedar, Rock, and Maquoketa Rivers. Bighead, Silver, and Grass (*Ctenopharyngodon idella*) Carp reproduction had not been documented in Iowa prior to the study. Over 16,000 eggs and 72,000 age-0 fishes of unknown species were collected in 2014 and 2015 from the Cedar, Iowa, Skunk, Des Moines and Mississippi Rivers. In addition, 2,964 adult Asian carp were collected from the Mississippi, Des Moines, Skunk, and Iowa Rivers. Spawning females were not captured in 2014 but were captured from April to June in 2015. Egg densities peaked in late May and mid-June, whereas age-0 fish densities were greatest during August in both years. Asian carp eggs and age-0 fish were captured in the Skunk, Iowa, and Mississippi Rivers in 2014. The highest densities of age-0 Asian carp occurred within the tributaries and immediately downstream of each confluence with the Mississippi River. Adult Silver Carp were more numerous than Bighead Carp in all locations sampled. Asian carp size and age structure and growth rates varied among sites. Egg, larval, and adult samples from 2016 continue to be processed and additional data analysis is being conducted to evaluate patterns of reproduction and adult population characteristics. Another interim report of the project is due January 15, 2017.



<b>Aquatic Invasive Species Expenditures</b>		
	FY06	FY16
Personnel	\$85,234	\$359,278
Travel Expenses	\$4,915	\$28,688
State Vehicle Operation	\$3,281	\$14,402
Office Supplies	\$399	\$110
Facility Maintenance Supplies	\$26	\$2,829
Equipment Maintenance Supplies	\$2,936	\$4,045
Ag Supplies	\$42,751	\$13,256
Other Supplies	\$100	\$2,319
Printing	\$477	\$3,075
Uniforms	\$455	\$1,155
Postage	\$536	\$166
Communications	\$651	\$1,324
Utilities	\$0	\$148
Professional and Scientific Services	\$0	\$115,325
Outside Services	\$595	\$625
Advertising and Publicity	\$11,390	\$16,272
Reimbursement	\$0	\$24
Equipment	\$1,042	\$15
IT Equipment and Software	\$0	\$464
Indirects	\$9,768	\$3,164
Total	\$164,556	\$41,092

## **BOATING NAVIGATION ENFORCEMENT AND WATER SAFETY EXPENDITURES**

During the summer months, conservation officers and seasonal water patrol officers around the state use a variety of enforcement techniques to keep Iowa waterways safe for all ages.

Several group enforcement efforts on Iowa's 19,000 miles of interior rivers are conducted annually and are known as river sweeps. This technique allows officers to start at a specific point and continue downstream contacting boaters and educating them about boating regulations and safety.



Boating While Intoxicated (BWI) enforcement is a focus every year for officers. Iowa participated in "Operation Dry Water" on June 24-26, 2016, which is a national campaign that emphasizes the dangers of boating and drinking.

More than 100 conservation officers participated in this three day event, contacting 2,201 boaters, performing safety equipment checks on 776 vessels and issuing 227 citations or warnings.

Throughout the summer, a total of 44 BWI arrests were made by various officers.

Conservation officers provide boating education programs to various groups throughout the year. Seventy-seven programs were presented to students about boating safety in all situations, including boating safety while waterfowl hunting. Approximately 1,370 students participated in these programs.





## Seasonal Water Patrol Officers Program

The department receives approximately 130 applications each year from potential candidates who want to be a part of the seasonal water patrol officer (WPO) program. The WPO program has been in effect since the 1980s, and allows individuals the opportunity to work for the Law Enforcement Bureau while performing on-the-water education and navigation enforcement.

The seasonal water patrol officers assist full time officers in the enforcement of all fishing and navigation activities across Iowa. This program helps train future full time officers. Currently, almost half of the DNR conservation officers started their careers as seasonal water patrol officers.



In 2006, the department employed 22 seasonal water patrol officers. In FY2016, the department had 29 WPOs on the books at a total cost of \$332,092. This fiscal year, \$177,351 was used from the Marine Fuel Tax fund to pay for a portion of the total cost of the WPOs. (See Addendum B, page 33).

**Table 4**

Law Enforcement Boating Activities	
Calendar Year*	Totals
<b>2016</b>	
Navigation Contacts	31,275
Navigation Citations	3,130
Special Events Patrolled	163
Accident Investigations	37
Boat Iowa Classes Taught	3
Boater Education Hours	2,074
Navigation Enforcement Hours	37,285





## Boater Education

A boating education coordinator was hired in 2007, and the DNR now has a successful and proactive boater educational program. Nationally, boating law administrators and education coordinators focus on helping boaters understand and realize the importance of wearing life jackets. The Iowa legislature, after 5 years of effort, passed a child safety law in 2008 requiring children under 13 to wear a PFD in a moving vessel.



In FY16 the education program continued to focus on the importance of wearing life jackets and repainted the boat ramps in Iowa's state parks. The "Life Jacket Zone" message reminds boaters about the importance of wearing a life jacket while on the water. The IDNR partnered with United States Power Squadron (USPS) members and United States Coast Guard Auxiliary (USCGA) members to assist with

painting the 4'x 4' bright yellow and black stencil on over 25 boat ramps located in the parks.

The Boater Education program partnered with Honey Creek Resort and implemented a "life jacket" loaner program. The focus of the program was to make a variety of life jackets available to the public at no cost. The sizes of life jackets ranged from adult sizes all the way down to infant sizes. If a boater is without enough life jackets or the proper size of life jacket for each person on-board, jackets may be borrowed for the day. Over 200 lifejackets were loaned out to the public during this year at Lake Rathbun. The Boater Education program will continue to seek out additional pilot locations for the "life jacket loaner" program.

The ".08 Don't Go Overboard" campaign used posters, public service announcements and public outreach to educate boaters on the dangers of drinking and boating. Information was again publicized to make sure the public understands that

the blood alcohol content level for drinking and boating is now the same as the level for operating a vehicle. The "Boating While Intoxicated" campaign will continue to grow in the future to make the waters of Iowa safer for everyone.



The department also offers Boater Education Certificate classes to accommodate children between the ages of 12 and 18 who need the course to be able to operate motor boats. A total of 18 students received a certificate through 3 classes, home study and internet courses offered in 2016.

The table below lists the FY 2016 operations costs for the boating navigation enforcement and safety education programs, with the baseline year of 2006 displayed. Note that part of the seasonal Water Patrol Officer costs came from the Marine Fuel Tax fund in FY16 at a cost of \$177,351 and \$154,741 was expended from the same fund for navigational safety patrol boats/radios, for an additional \$160,980 for navigation enforcement and boating safety this year.

**Table 5**

Navigation Enforcement and Safety Education		
	<b>FY06</b>	<b>FY16</b>
Personnel and Operations	\$1,366,842	\$1,754,314
Officer Retirements	\$73,986	\$329,488
Vehicles and Depreciation	\$204,916	\$285,500
In State Travel	\$54,495	\$1,937
Printing	\$60,274	\$0
Communications	\$30,509	\$22,088
Indirects	\$204,974	\$205,847
<b>Totals</b>	<b>\$1,995,996</b>	<b>\$2,599,174</b>

### **DNR Patrol Boats**

The Law Enforcement Bureau divides the state into 4 districts and employs district supervisors to manage each area. The supervisors determine specific needs when purchasing large patrol boats in order to provide quality navigation enforcement and boating education in each area. Officers use several different types of vessels for navigation enforcement and boating education.

The Department currently has approximately 36 large patrol boats for navigation enforcement and boating education on Iowa's waterways. The goal is to replace vessels at least every 5 years, and earlier if needed.

In FY 2016 the Department used \$154,741 from the Marine Fuel Tax fund and boat fund to supplement the purchase of large patrol boats/radios for navigation enforcement.



## Water Trails and Low-head Dam Public Hazard Program Expenditures

The Iowa DNR water trails and low-head dam public hazard program works statewide to ensure improved navigational safety on waterways throughout Iowa. Water safety education, establishment of a river mileage-based signage system and a hazard warning signage system, development of navigational maps, and advising placements and designs for water accesses and portage trails around dangerous dams are all components of the program mission.



Dozens of water trail construction projects, and planning and design meetings unfolded in fiscal year 2016. These project incorporated new techniques developed under statewide plans and are results of locally developed initiatives. Iowa DNR water trails and low-head dam public hazard programs are administered by the DNR rivers team under the Land and Waters Bureau. Navigation and water safety activities include:

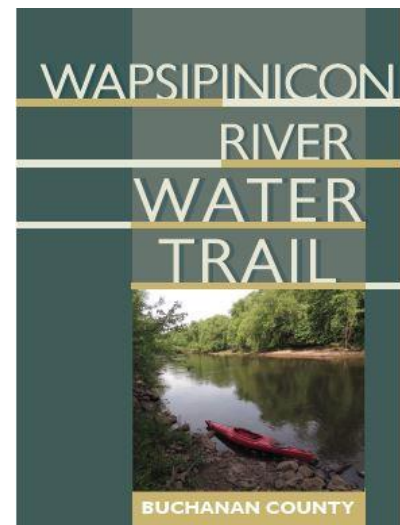
- Plans, administers funds for, and places navigational signage, including mileage-based access numbers at landings, roadway signage leading people to boat accesses, dam warning signage, etc. via the water trails program.
- Plans, designs, and maintains warning signage and portage trails at DNR-owned low-head dams.
- Works with communities to install dam warning signage where dams have led to fatalities for recreational users. All users are considered, including walk-in anglers powerboaters, tubers, and paddlers.
- Requires water trail developers to place, maintain, and update dam warning signage.
- Purchases and distributes educational flyers on canoe and kayak safety, low-head dam safety, participate in “Wear It” campaign targeting canoes and kayaks with promotional items purchased under operations budget.
- Advises fisheries, wildlife, county conservation, and municipal staff on boating access improvements, including boat ramps and canoe launches.
- Trains county conservation, DNR, and children’s camp staff in safely leading and teaching during canoe outings using American Canoe Association curriculum and the Rivers’ team certified ACA instructors.

- Works to reduce hazards of low-head dams with high death rates through management of mitigation projects.

The Iowa DNR encourages local ownership of water trails throughout Iowa that support education, navigation, and recreation. Technical assistance is provided to communities working to find solutions at aging dams, and provides funds for mitigating dam problems, solving safety hazards, fish passage, upstream flooding, and failure-related issues.



The river programs team serves a growing segment of Iowans – canoeists, kayakers, an innertubers, as well as more traditional recreational segments, including anglers and power boaters. National statistics show that canoeists and kayakers have a higher rate of death per capita compared to other boaters. Two brochures, “SmartStart for Safe Paddling” and “The Drowning Machine” continue to be disseminated to county recorders, boat rental facilities, paddling clubs, local governments, and field staff. This fiscal year, the water trails program completed a Lower Cedar River map and guide, its ninth “Expedition and Fishing Guide” for whole river systems. These maps contain angling information, dam, and boat launch locations. Printing is paid for cooperatively with the fisheries bureau, and the brochure maps are being disseminated in cooperation with Iowa Welcome Centers, county conservation boards, state parks, and fish hatcheries.





## **Staffing**

The river programs coordinator is responsible for overall program direction, which in the current fiscal year involved statewide plan development, collaborating on river survey, assessment, and design work with DNR Engineering, and technical assistance provided to external dam owners. A construction technician continues to plan, develop, and maintain warning signage plans and portage trails,



including launches and landings, around these dams. The construction technician also advises other communities on similar projects. Half of one FTE's time focuses on leading river survey and assessment work at low-head dams. The other half of this position focuses on the Protected Water Areas program, a land conservation program along rivers, and is not within the purview of this report. A water trails coordinator contracts with local planners to lead planning efforts in coordination with state-level strategies and standards. An outreach coordinator plans events, organizes training opportunities for trip leaders and rental personnel, conducts surveys and disseminates marketing materials and publications.

Iowa DNR owns or manages six major low-head dams on navigable streams. River programs staff updated signage plans according to the new hazard signage manual, installed signs, and maintain portages at these dams in fiscal year 2016.

**Table 6**

<b>Expenditures for Water Trails &amp; Dam Safety</b>		
	<b>FY06</b>	<b>FY16</b>
Personnel	\$7,572	\$118,217
Travel Expenses	\$1,038	\$6,961
Office Supplies & IT Hardware		\$7,938
Facility Maintenance Supplies		\$1,236
Equipment Maintenance		\$1,042
Other Supply (training programs equipment, safety education & outreach materials)		\$951
Print, binding, and publications	\$1,800	\$1,657
Uniforms		\$215
Communications		\$1,729
Rentals		\$297
Outside services		\$2,592
Reimbursement & ITS Reimbursement		\$214

Postage		\$219
Equipment Non Inventoriable		\$189
Indirects		\$15,486
TOTAL	\$10,410	\$158,943

### **Paddlesports safety**

The Rivers team offered a total of seven “train the trainers” canoe and kayak courses for trip leaders, city parks and recreation staff, naturalists and other agency staff. This skills course responds to a need identified by agencies with canoe fleets that take groups on lakes and river. It provides consistent training for leading safe tours, developing risk management plans, and demonstrating appropriate canoeing skills. DNR rivers team staff also received American Canoe Association training from instructor trainers to update training credentials. The national “Wear It” campaign was supported at events throughout the year, where promotional stickers were distributed.





### **Water trails conservation crew**

The rivers team manages projects that are developed and constructed by the water trails conservation crew, under contract with Conservation Corps, Iowa. The Corps' work is funded separately under infrastructure appropriations. The water trails conservation crew works statewide, often work in remote areas where typical contractors could not. They construct portage trails and accesses, plant restoration projects, cut through log jams, and hang important navigational and warning signage in diverse settings.





## **Dam mitigation**

Iowa DNR River program staff works with dam owners to retire or mitigate a variety of problems when a dam has safety hazard issues and fish passage problems. Oftentimes, federal funding is available for projects that involve fish passage, so a natural development is to solve multiple problems combined into a single project Iowa DNR staff work with communities statewide to explore, analyze, or develop dam mitigation projects. Dam mitigation priority areas are show on the map (Figure 1) below.

Mitigation projects anticipated to be completed in fiscal year 2017 include the Cornbelt REC Dam, Quaker Mill Dam, Willow Creek Dam #1, and Willow Creek Dam #2

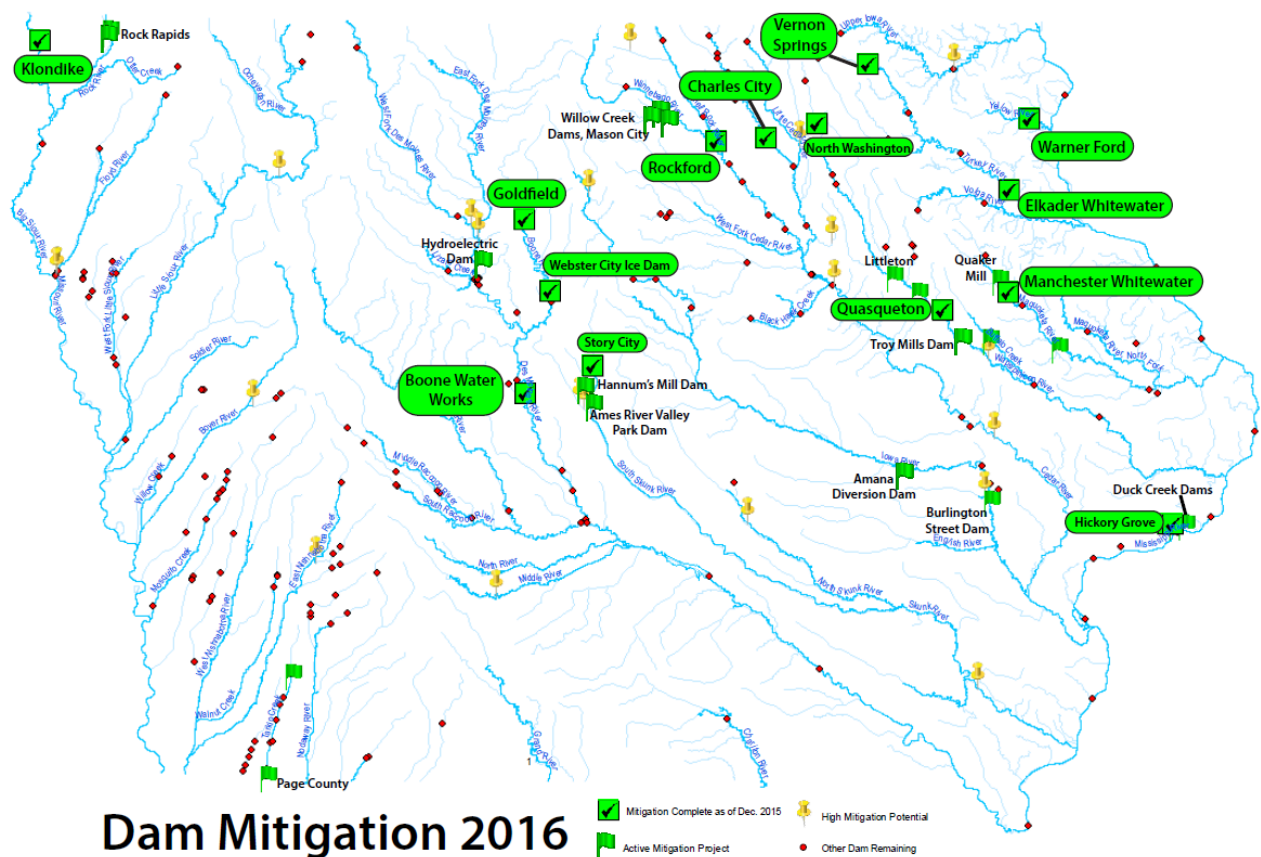


## Program outlook

Training programs will continue to focus on individuals who lead programs, safe livery operations, and increasing availability of American Canoe Association courses offered throughout the state will also be important responses to increasing interest in river recreation.

See Figure 1 for locations of future hazard mitigation projects via removal or modification at several dams in the next year are likely to include the Littleton Dam to Rapids Conversion projects.

**Figure 1: Dam Mitigation Projects, Completed and Active**

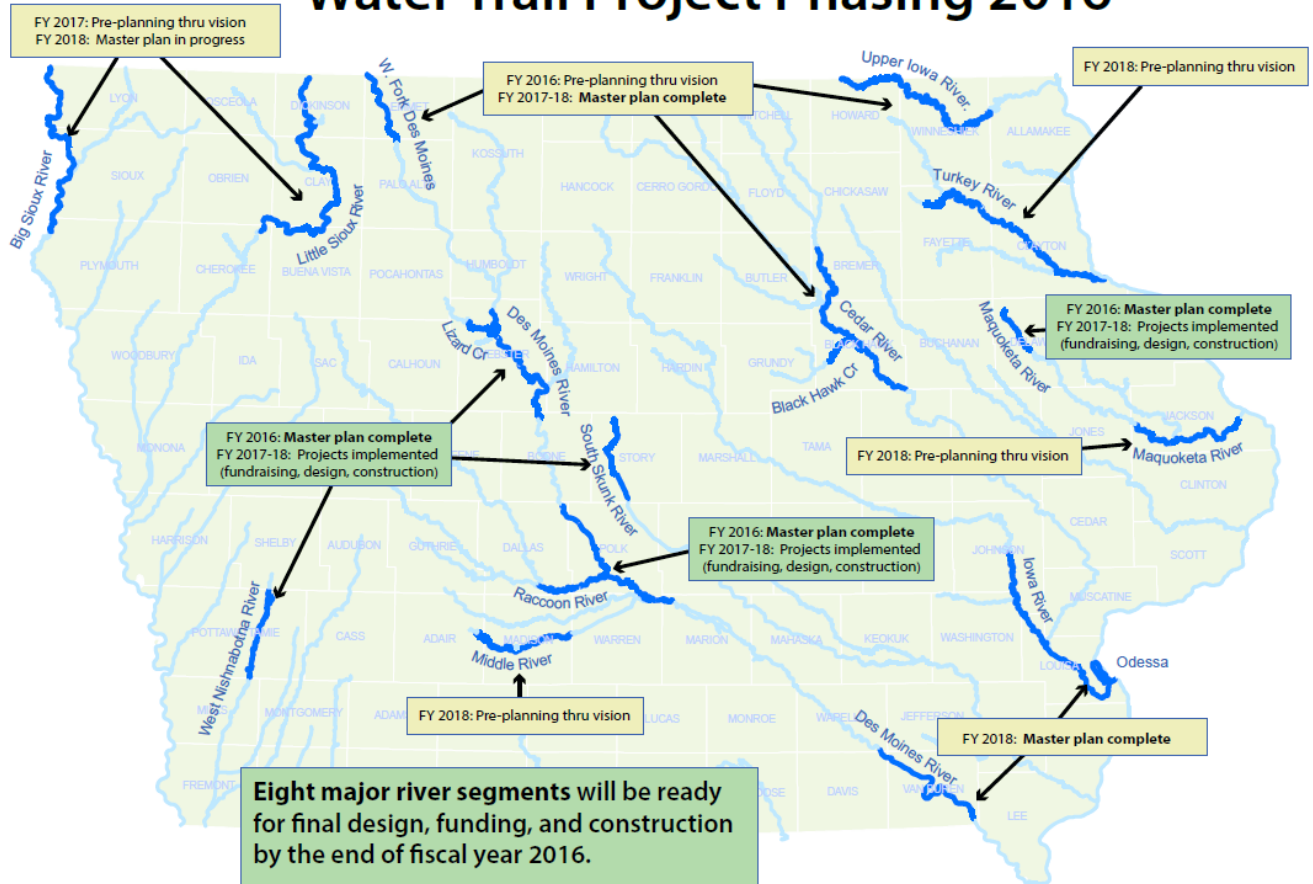


As Figure 2 shows, six water trails will have completed master plans by 2017. These projects will be eligible for grant funding upon plan completion. Statewide plans completed in 2010 have led to a consistent and vetted local planning framework for water trails and low-head dams. For local entities, this will result in lower-maintenance projects with increased local ownership in water trails. Statewide, this will result in a more robust and easy-to-understand navigational system. As numbers of recreational users increase, increasing focus on managing the experiences for all Iowans – from young to old – will

become more important than ever. It has also led to increased law enforcement and education needs related to interacting with private landowners and other users along navigable rivers. To handle increased use, all Iowans must learn to treat our waterways respectfully to avoid litter and obnoxious behavior.

**Figure 2: Outlook for Water Trails**

## Water Trail Project Phasing 2016



**Table 7**

<b>Water Trails and Dam Safety Status At A Glance</b>		
	<b>2006</b>	<b>2016</b>
Total number of individual water trails with state designation, to date	0	24
Miles of water trails designated	0	931
Miles of water trail study areas	0	807
Number of low-head dams with warning signs	2	44
Number of portage trails around low-head dams completed, to date	2	32
Number of low-head dams modified or removed for safety purposes, to date	0	14



In addition to the 931 miles of state-designated water trails (see Figure 3), the river programs staff and local planning contractors are working with local communities on 807 miles of study areas being master planned – some of those miles are currently designated, and others are not. Some study areas from prior years will not continue forward after better understanding public expectations of state-designated water trails. The program has focused on implementing statewide plans focusing on river management and law enforcement needs, infrastructure needs, maintenance expectations, and comprehensive navigational / warning signage systems based on river mileage. These plans solve address problems, including safety, overcrowding or underuse, jurisdictional issues, and user expectations.

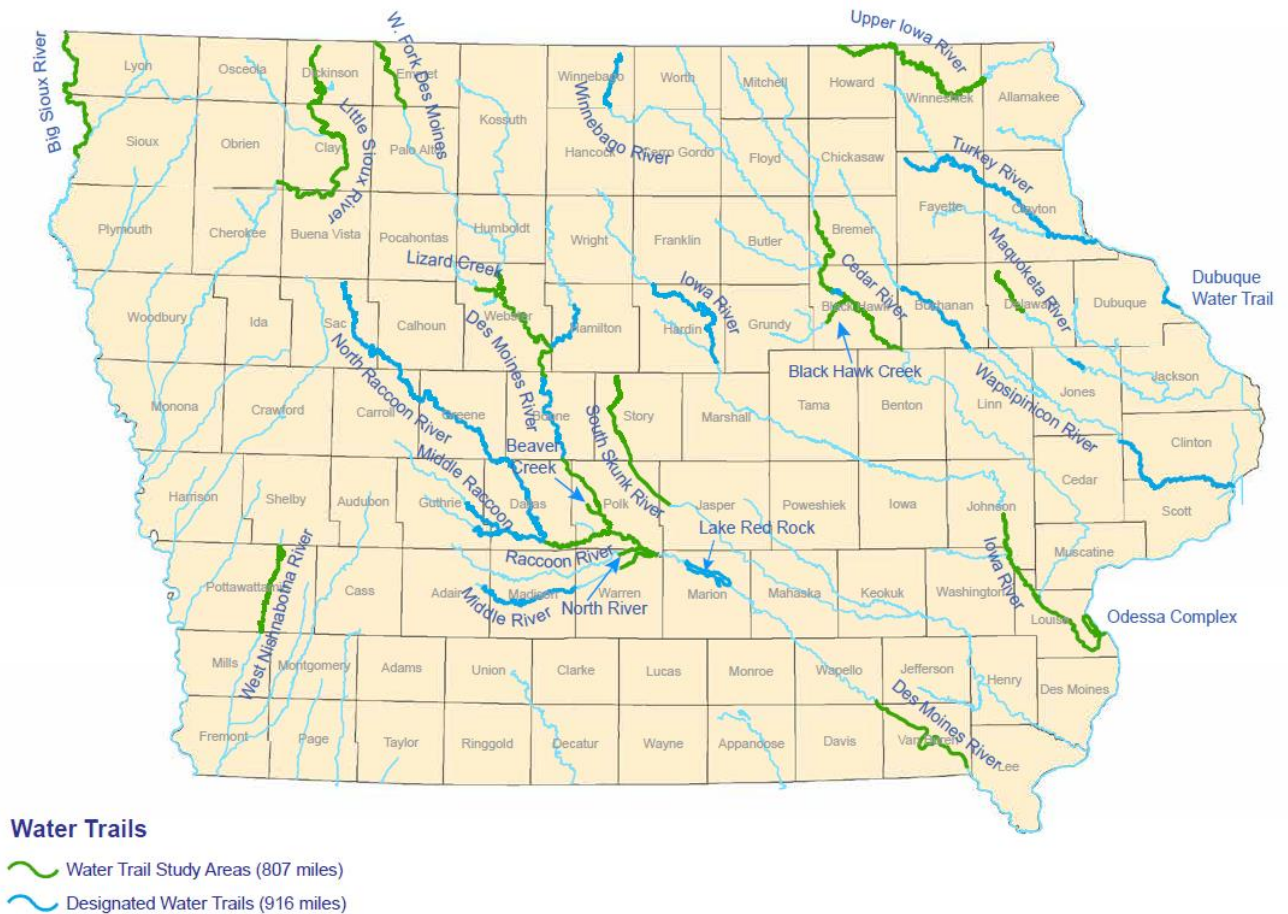




Increasingly, river restoration components are being incorporated into all river programs projects. Examples include stream bank restorations along water trails for safety and aesthetic reasons, site restoration at dam mitigation projects, and incorporating aquatic habitat into navigational access projects for anglers and river species. Restoration skills among program staff are helping with project stability needs in the always changing river setting.



**Figure 3: Designated Water Trails and Study Areas**



## BOATING RECREATION INFRASTRUCTURE MAINTENANCE AND MANAGEMENT

The Iowa DNR owns or manages infrastructure for boating recreation across the state. *This infrastructure is integral to safe boating and access to the waters.*



The Law Enforcement Bureau and the Fisheries Bureau do not typically manage land and do not have the staff for this type of maintenance and management. The Wildlife Bureau staff manages and maintains state fishing access areas, boat ramps and docks in cooperation with other bureaus. See the attached Addendum A for the listing of the safe boating access areas managed by the Wildlife Bureau staff. Boating populations, including paddlers, have increased over the years and there is an ever-growing demand for safe, convenient and appropriate boating access areas.

These areas are heavily used for access 9 months of the year, or even more depending on the weather. They require frequent maintenance, especially since most are along river corridors in flood plains. Maintenance and management includes re-rocking areas, cleaning silt from the boat ramps, custodial functions such as removing trash and debris and maintaining signage. In addition to the staff time of the actual work, drive time and driving expenses are included, as Wildlife Headquarters cover 4-6 counties and the areas are remote.

The attached listing of areas represents 182 accesses that qualify for federal boat access funds. There is a detailed federal process to obtain the funds through a formula, and rigorous federal audits on those funds to make sure the boat fees and federal funds are used for the purpose of maintaining safe boat access areas. There are between one and four access ramps for each of the sites that require maintenance. The total cost per access averages out to less than \$5,000 a year in maintenance. The cost of this program is leveraged **75% federal** with 25% boat registration fees.

**Table 8**

Boat Fee Expenditures for Boating Infrastructure Maintenance & Management (Salaries for labor, contracted services, equipment, signage, publications, etc.)			
	Federal	Boat Fees	Total
FY06 (base year)	\$562,055	\$187,351	\$749,406
FY16	\$420,993	\$140,331	\$561,324

**NOTE: These federal funds can only be used for this purpose, and would be forfeit if not matched by boat fees.**

## IOWA'S MARINE FUEL TAX (MFT) PROGRAM



The Iowa DNR Marine Fuel Tax program is not directly tied to the boat fee revenues and expenditures, but it is a complimentary program. MFT has played a vital role in providing recreational boaters new opportunities as well as maintaining public lakes used by boaters.

- **Revenue from the excise tax on the sale of motor fuel used in watercraft**  
The amount of revenue generated by the marine fuel tax legislation equals nine-tenths of one percent of the state excise tax on gas, minus 3% of the marine fuel tax total for administrative costs and minus the amount refunded to commercial fishers based on the gallons of fuel they used.
- **MFT funds are leveraged with a variety of sources including Federal Coast Guard, Corps of Engineers Section 1135, State of Iowa Parks and Institutional Roads Fund, and local city and county conservation funds.**
- **Annual MFT funding \$4.0 to \$4.4 million.** Funds are often “carried forward”, as they are connected with construction projects that might take multiple years to complete.
- **MFT funds are appropriated to the DNR to support and enhance recreational boating. Funded projects may include but are not limited to:**
  1. Dredging and renovation of lakes of this state.
  2. Acquisition, development, and maintenance of access to public boating waters.
  3. Development and maintenance of boating facilities and navigation aids.
  4. Administration, operation, and maintenance of recreational boating activities.
  5. Acquisition, development, and maintenance of recreational facilities associated with recreational boating.
- **Examples of MFT projects:**
  - ◆ Docks and buoys
  - ◆ New lake construction projects
  - ◆ Boat ramp restroom installations (various counties)
- **DNR Water Recreation Access Cost-Share Program**
  - ◆ Around \$200,000 of MFT funds are available in the form of grants to local cities and counties for boat access facilities to lakes and streams.
  - ◆ Projects are funded 75% state to 25% local match
  - ◆ DNR receives grant requests for 15 to 30 projects and awards amounts usually between \$2,000 and \$50,000

Addendum B is the FY 2016 MFT expense report.



## **Addendum A--Wildlife Bureau Management and Maintenance of Boating Accesses Areas**

Badger Creek Recreation Area 1
Badger Creek Recreation Area 2
Badger Lake
Barringer Slough Wildlife Area
Bartlett Access
Bel Aire Access & Outlet
Big Sioux River Complex
Black Hawk Wildlife Area
Blackhawk Bottoms
Blue Lake
Bluebird Access
Brighton Access
Browns Lake
Center Lake Complex
Christopherson Slough Complex
Clear Lake Wildlife Unit
Cliffland Access
Cone Marsh
Dakota City Access
Dan Green Slough
Deer Island Wildlife Area
Des Moines River Access
Dewey's Pasture Complex
Diamond Lake
Edgewater Beach
Elk Creek Marsh
Elk Lake Wetland Complex
English River Access
Eveland Access
Five Island Lake
Fogle Lake 1
Fogle Lake 2
Fogle Lake 3
Gitchie Manitou
Goose Lake
Grand River Wildlife Unit 1
Grand River Wildlife Unit 2

Great Lakes Wildlife Unit
Hales Slough
Hamburg – Mitchell Access
Hardfish Access
Hawthorn Wildlife Area
Ingham-High Wetland Complex
Iowa Lake 1
Iowa Lake 2
Iowa Lake Access 3
Kattleson Hogsback Complex
Klum Lake
Lake Cornelia Access
Lake Icaria
Lake Icaria Wildlife Area 1
Lake Icaria Wildlife Area 2
Lake Sugema 1
Lake Sugema 2
Little Clear Lake
Little River
Little Sioux Wildlife Area
Little Storm Lake
Lizard Lake
Lower Hamburg Bend
MacCoon Access
McKain Access
Meadow Lake 1
Meadow Lake 2
Miami Lake Access
Middle Decatur Bend
Mississippi River Islands
Missouri River Wildlife Unit
Morse Lake
Mount Ayr Wildlife Area 1
Mount Ayr Wildlife Area 2
Nishnabotna Wildlife Unit
Odessa Wildlife Area
Orleans Access
Pickerel Lake
Prairie Lakes Wildlife Unit
Rainbow Bend Access

Rand Access
Rathbun Wildlife Area
Rathbun Wildlife Unit
Red Cedar Access
Redwing Access
Rice Lake Wildlife Area
Riverton Wildlife Area
Rock Creek Island Preserve
Rock-Sioux Access
Round Lake Wildlife Area
Rubio Access
Rush Lake
Selma Access
Shidepoke Access
Silver Lake
Silver Lake Complex
Skunk River Access
Skunk River Wildlife Area
Snyder Bend
South Skunk River Access
South Twin Lake
Spirit Lake Access
Sugema Wildlife Unit
Tama Beach Access
Thayer Pond Recreation
Three Mile Lake
Three Mile Wildlife Area 1
Three Mile Wildlife Area 2
Tieville Bend
Turkey Run Access
Turtle Bend Wildlife Area
Tuttle Lake Wetland Complex
Twelve Mile Lake
Tyson Bend
Union Mills Access
Upper Decatur Bend
Virgin Lake
Washta Access
Weedland Access
West Fork Access

West Swan Lake
White Horse Access
Wiese Slough Wildlife Area
Williamson Pond
Willow Slough
Willows Access
Winnebago Bend 1
Winnebago Bend 2

## Addendum B—MFT 2016 Expenditure Report

Project Name	Federal	MFT	Other		Total Expense
Elk Rock SP Boat Ramp Parking & Paving		\$695			\$695
Elk Rock Fish Cleaning Station		\$160,586			\$160,586
Elk Rock Ranger Point Protection		\$372,465			\$372,465
Fairport Rec Area Double Boat Ramp & Parking	\$268,664	\$268,664			\$537,328
Fisheries Minor Projects		\$117,022			\$117,022
Green Valley SP Storage Bldg	\$45,472	\$45,472			\$90,944
Honey Creek Resort-Marina Development		\$333,185			\$333,185
Lake Darling-Mid Lake Ramp Repaving		\$518			\$518
Law Enforcement Minor Projects		\$15,449			\$15,449
Nobles Island Pit Vault Replacement	\$28,604	\$28,604			\$57,209
Pine Lake Storage Bldg		\$61,040			\$61,040
Rock Creek Boat Ramp Repairs		\$50,539			\$50,539
State Parks Minor Projects		\$146,402			\$146,402
Statewide Docks& Fish Cleaning Stations-Non-CS		\$123,261			\$123,261
Statewide Emergency/Miscellaneous		\$71,993			\$71,993
Statewide Engineering & Design		\$290,991			\$290,991
Statewide Ramp/Access Renovation		\$3,600			\$3,600
Statewide Large Patrol Boats on Reservoirs	\$80,490	\$80,490			\$160,980
Statewide-Outside Design		\$905			\$905
Statewide-Pit Vault Restrooms at Ramps		\$95,101			\$95,101
Statewide Shoreline Rip Rap		\$36,792			\$36,792
Statewide WRAC Grants		\$294,361			\$294,361
Twelve Mile Lake Acquisition & Development		\$250,565			\$250,565
Walnut Creek Marsh		\$27,609			\$27,609
Water Recreation Resources-Tranfer to Ops		\$455,715			\$455,715
Water Trails Minor Projects		\$81,555			\$81,555
Wildlife Minor Projects		\$99,561			\$99,561
<b>Total Marine Fuel Tax</b>	<b>\$423,230</b>	<b>\$3,513,141</b>	<b>\$0.00</b>		<b>\$3,936,371</b>